Public Health Concerns of the H2S Exceedances Near & Around New Indy Facility, SC

June 12 - June 20/2021

Updated Analysis

DRAFT

Public Health Concerns of the H2S Exceedances Near & Around New Indy Facility, SC

July 23, 2021

DRAFT

Introduction:

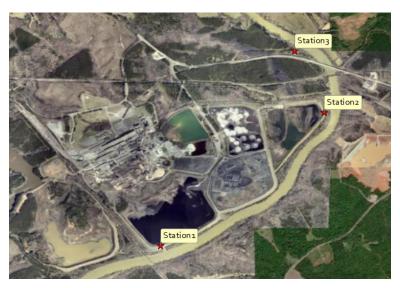
There have been concerns that New Indy Facility located in Catawba, South Carolina had been generating bad odor and the communities around the facility were reporting odor complaints daily. Therefore, Region 4 EPA and SCDHEC have been collecting H2S data at the facility's 3 stations and 10 additional communities surrounding the facility. This report is generated to conduct an analysis of the H2S concentrations, number of complaints and the extent of H2S plumes for July 12 to July 21, 2021. The H2S concentrations exceeded the 600ppb on 6/12 (675ppb), 6/14 (1330ppb), 6/15 (624.7ppb, 676.6ppb, 674.9ppb), and 6/20 (812ppb, 1024ppb). To better understand the relativeness of these exceedances, all days between 6/12 and 6/21 have been analyzed.

Methods:

Daily reports of H2S concentrations for each of the 3 fence line stations at the Facility and the 10 communities were gathered along with the locations of the odor complaints. This data was summarized, mapped, and analyzed for each of the days. The H2S concentrations were collected by the monitors every 30 minutes for potential exceedances for 600ppb and were summarized and analyzed based on daily results. The odor complaints were reported by the public anytime to SCDHEC to their website.

All the daily odor complaints were layered on top of the maximum H2S concentrations collected for the same day. In addition, wind roses (direction of the wind & speed) for each day was generated at the facility station.

Map 1. Locations of Fence line Monitors



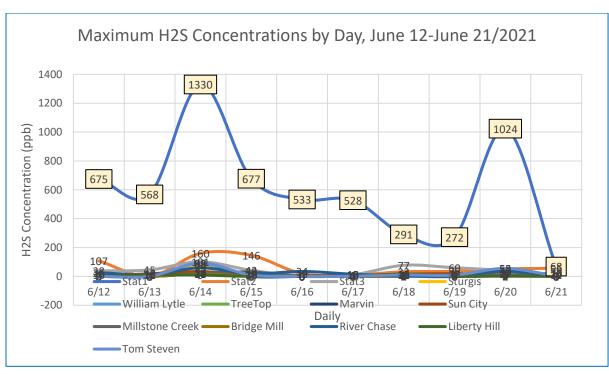
Map 2. Locations of Facility Stations & the Communities.



Table 1. Summary - Maximum Concentrations(ppb) at Facility Stations & Communities.

| | | Maximum H2S Concentration | | | | | | | | | | | |
|-------------------------------|---|---------------------------|-------|---------|------------------|---------|--------|----------|--------------------|----------------|----------------|-----------------|---------------|
| Date (Odor Complaints)* | Stat1 | Stat2 | Stat3 | Sturgis | William Lytle | ТгееТор | Marvin | Sun City | Millstone Creek | Bridge Mill | River Chase | Liberty Hill | Tom Steven |
| 6/12/2021 (21) | 675 | 107 | 38 | 0 | 0 | 2 | 0 | 3 | 10 | 0 | 26 | 0 | 0 |
| 6/13/2021 (11) | 568 | 1 | 45 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 11 | 10 | 0 |
| 6/14/2021 (567) | 1330 | 160 | 101 | 74 | 89 | 20 | 17 | 33 | 21 | 16 | 59 | 9 | 92 |
| 6/15/2021 (58) | 677 | 146 | 42 | 0 | 0 | 3 | 13 | 10 | 30 | 2 | 18 | 0 | 10 |
| 6/16/2021 (4) | 533 | 19 | 5 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 34 | 0 | 0 |
| 6/17/2021 (15) | 528 | 10 | 12 | 0 | 2 | 0 | 0 | 6 | 2 | 0 | 15 | 1 | 1 |
| 6/18/2021 (108) | 291 | 32 | 77 | 8 | 12 | 2 | 1 | 15 | 2 | 4 | 3 | 16 | 10 |
| 6/19/2021 (56) | 272 | 35 | 60 | 7 | 0 | 5 | 4 | 18 | 9 | 4 | 0 | 0 | 9 |
| 6/20/2021 (61) | 1024 | 52 | 40 | 21 | 17 | 4 | 5 | 9 | 7 | 2 | 36 | 2 | 55 |
| 6/21/2021 (64) | 68 | 56 | 5 | 0 | 0 | 20 | 23 | 12 | 16 | 1 | 0 | 0 | 3 |
| | (Odor Complaints)* = Source "Lancaster & York Counties Odor 2021", DHEC - Odor Complaints - Jan/June 2021 | | | | | | | | | | | | |

Table 2. Maximum H2S Concentrations at the Facility Fenceline.



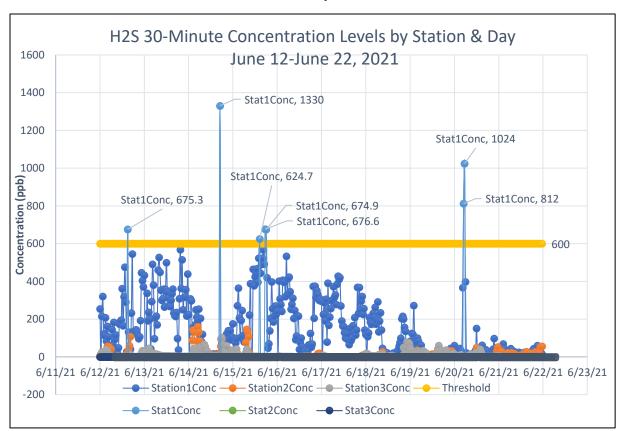


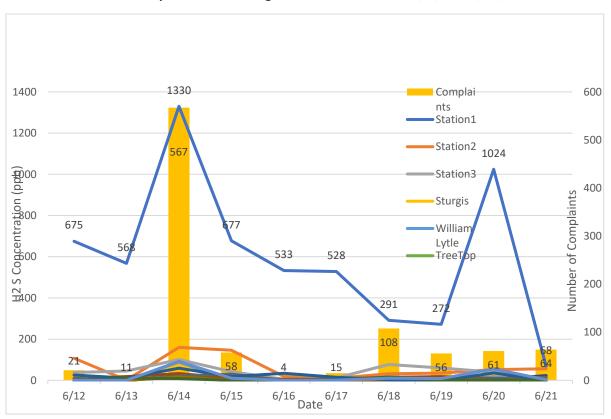
Table 3. Maximum H2S Concentrations at the Facility Fenceline.

(Odor Complaints)* = Source "Lancaster & York Counties Odor 2021", DHEC - Odor Complaints - Jan/June 2021

Table 4. Highest H2S Concentrations (ppb) at the Facility Stations and the Communities with Total Complaints by Day.

| | Highest Daily H2S Concentrations (date) | | | | | | | | | |
|-----------------|---|------|------|------|------|------|------|------|------|------|
| Facility | 6/12 | 6/13 | 6/14 | 6/15 | 6/16 | 6/17 | 6/18 | 6/19 | 6/20 | 6/21 |
| Station1 | 675 | 568 | 1330 | 677 | 533 | 528 | 291 | 272 | 1024 | 68 |
| Station2 | 107 | 1 | 160 | 146 | 19 | 10 | 32 | 35 | 52 | 56 |
| Station3 | 38 | 45 | 101 | 42 | 5 | 12 | 77 | 60 | 40 | 5 |
| | | | | | | | | | | |
| Community | | | | | | | | | | |
| Sturgis | 0 | 0 | 74 | 0 | 0 | 0 | 8 | 7 | 21 | 0 |
| William Lytle | 0 | 0 | 89 | 0 | 0 | 2 | 12 | 0 | 17 | 0 |
| TreeTop | 2 | 0 | 20 | 3 | 0 | 0 | 2 | 5 | 4 | 20 |
| Marvin | 0 | 0 | 17 | 13 | 0 | 0 | 1 | 4 | 5 | 23 |
| Sun City | 3 | 18 | 33 | 10 | 5 | 6 | 15 | 18 | 9 | 12 |
| Millstone Creek | 10 | 0 | 21 | 30 | 0 | 2 | 2 | 9 | 7 | 16 |
| Bridgemill | 0 | 0 | 16 | 2 | 0 | 0 | 4 | 4 | 2 | 1 |
| RiverChase | 26 | 11 | 59 | 18 | 34 | 15 | 3 | 0 | 36 | 0 |
| Liberty Hill | 0 | 10 | 9 | 0 | 0 | 1 | 16 | 0 | 2 | 0 |
| Tom Steven | 0 | 0 | 92 | 10 | 0 | 1 | 10 | 9 | 55 | 3 |
| | | | | | | | | | | |
| Complaints | 21 | 11 | 567 | 58 | 4 | 15 | 108 | 56 | 61 | 64 |

Table 5. Number of complaints and the highest H2S concentrations, 6/12 – 6/21, 2021



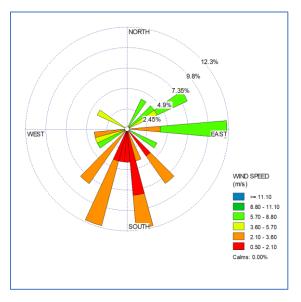
June 12/ 2021

| June 12, 2021 | Station 1 | Station 2 | Station 3 |
|----------------------|---------------|---------------|---------------------|
| (21 Odor Complaints) | 30min Avg H2S | 30min Avg H2S | |
| | Conc. | Conc. | 30min Avg H2S Conc. |
| Units | ppb | ppb | ppb |
| 6/12/21 12:00 AM | 254.1 | 6.0 | 1.2 |
| 6/12/21 12:30 AM | AX | 14.7 | 3.6 |
| 6/12/21 1:00 AM | 215.1 | AX | 25.4 |
| 6/12/21 1:30 AM | 320.0 | 0.4 | AX |
| 6/12/21 2:00 AM | 121.3 | 0.2 | 18.1 |
| 6/12/21 2:30 AM | 112.5 | 0.2 | 11.5 |
| 6/12/21 3:00 AM | 207.3 | 0.2 | 33.8 |
| 6/12/21 3:30 AM | 83.2 | 1.0 | 38.0 |
| 6/12/21 4:00 AM | 161.4 | 56.6 | 29.0 |
| 6/12/21 4:30 AM | 106.5 | 51.7 | 9.6 |
| 6/12/21 5:00 AM | 8.7 | 53.2 | 3.7 |
| 6/12/21 5:30 AM | 38.2 | 38.6 | 2.0 |
| 6/12/21 6:00 AM | 31.5 | 42.2 | 1.8 |
| 6/12/21 6:30 AM | 144.6 | 4.4 | 1.4 |
| 6/12/21 7:00 AM | 63.8 | 0.3 | 1.3 |
| 6/12/21 7:30 AM | 182.5 | 0.2 | 1.3 |
| 6/12/21 8:00 AM | 92.1 | 0.2 | 1.2 |
| 6/12/21 8:30 AM | 116.8 | 0.2 | 1.6 |
| 6/12/21 9:00 AM | 24.2 | 0.3 | 1.9 |
| 6/12/21 9:30 AM | 18.7 | 0.4 | 1.9 |
| 6/12/21 10:00 AM | 47.6 | 0.2 | 1.9 |
| 6/12/21 10:30 AM | 173.7 | 0.3 | 1.9 |
| 6/12/21 11:00 AM | 188.2 | 0.3 | 1.8 |
| 6/12/21 11:30 AM | 194.3 | 0.4 | 2.0 |
| 6/12/21 12:00 PM | 362.1 | 0.3 | 1.8 |
| 6/12/21 12:30 PM | 165.2 | 0.2 | 1.6 |
| 6/12/21 1:00 PM | 318.4 | 0.2 | 1.5 |
| 6/12/21 1:30 PM | 474.9 | 0.2 | 1.5 |
| 6/12/21 2:00 PM | 290.2 | 0.2 | 1.7 |
| 6/12/21 2:30 PM | 27.3 | 15.3 | 1.1 |
| 6/12/21 3:00 PM | 675.3 | 0.3 | 1.1 |
| 6/12/21 3:30 PM | 132.1 | 36.1 | 1.9 |
| 6/12/21 4:00 PM | 23.7 | 59.1 | 1.6 |
| 6/12/21 4:30 PM | 40.2 | 107.4 | 11.8 |
| 6/12/21 5:00 PM | 231.9 | 2.2 | 1.4 |
| 6/12/21 5:30 PM | 545.1 | 0.2 | 1.1 |

| June 12, 2021 | Station 1 | Station 2 | Station 3 |
|----------------------|---------------|---------------|---------------------|
| (21 Odor Complaints) | 30min Avg H2S | 30min Avg H2S | |
| | Conc. | Conc. | 30min Avg H2S Conc. |
| 6/12/21 6:00 PM | 132.5 | 0.2 | 1.5 |
| 6/12/21 6:30 PM | 134.6 | 0.2 | 1.5 |
| 6/12/21 7:00 PM | 139.2 | 0.2 | 1.1 |
| 6/12/21 7:30 PM | 144.0 | 0.2 | 1.4 |
| 6/12/21 8:00 PM | 131.2 | 0.2 | 1.4 |
| 6/12/21 8:30 PM | 112.9 | 0.2 | 1.1 |
| 6/12/21 9:00 PM | 95.9 | 0.2 | 1.0 |
| 6/12/21 9:30 PM | 106.7 | 0.2 | 1.0 |
| 6/12/21 10:00 PM | 191.8 | 0.2 | 1.1 |
| 6/12/21 10:30 PM | 445.9 | 0.2 | 21.5 |
| 6/12/21 11:00 PM | 404.1 | 0.2 | 33.0 |
| 6/12/21 11:30 PM | 371.2 | 0.2 | 28.4 |

A. Which way is the wind blowing from the facility on June 12, 2021?

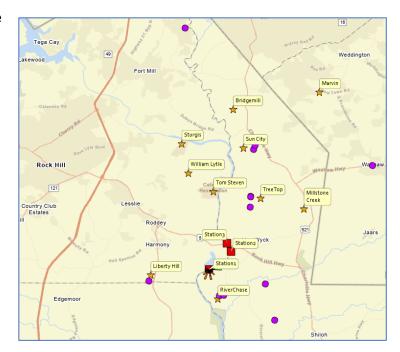
Wind & Speed Direction are based on Meteorological data from Station 1 (for Station2 & Station3) – Going North





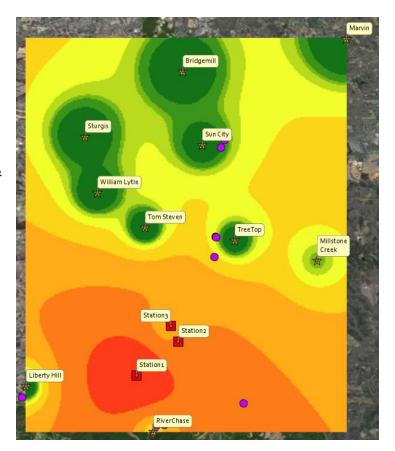
B. Where are the complaints on June 12, 2021?

There were 21 odor complaints which is not enough to see any clusters.



C. What is the concentration distribution on June 12, 2021?

There was one incident of 675 ppb for H2S, above the 600-ppb exceedance level on this day. This density map shows that the increased H2S concentration on this day was still near the Facility & had not reached completely at the northern communities. Higher concentration contours are in red near the Facility.



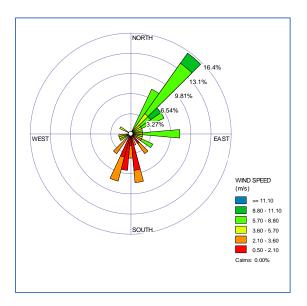
June 13/2021

| | Station 1 | Station 2 | Station 3 |
|----------------------|---------------|---------------|---------------|
| June 13, 2021 | H2S | H2S | H2S |
| (11 Odor Complaints) | 30min Avg H2S | 30min Avg H2S | 30min Avg H2S |
| | Conc. | Conc. | Conc. |
| Units | ppb | ppb | ppb |
| 6/13/21 12:00 AM | 431.8 | 0.2 | 22.3 |
| 6/13/21 12:30 AM | BF | 0.2 | 4.5 |
| 6/13/21 1:00 AM | BF | BF | 8.0 |
| 6/13/21 1:30 AM | 336.7 | BF | BF |
| 6/13/21 2:00 AM | 191.4 | 0.6 | BF |
| 6/13/21 2:30 AM | 236.1 | 0.2 | 45.2 |
| 6/13/21 3:00 AM | 199.1 | 0.2 | 31.2 |
| 6/13/21 3:30 AM | 43.1 | 0.2 | 23.7 |
| 6/13/21 4:00 AM | 293.0 | 0.2 | 20.1 |
| 6/13/21 4:30 AM | 490.7 | 0.2 | 18.7 |
| 6/13/21 5:00 AM | 380.5 | 0.2 | 19.5 |
| 6/13/21 5:30 AM | 95.9 | 0.2 | 13.6 |
| 6/13/21 6:00 AM | 208.9 | 0.2 | 15.1 |
| 6/13/21 6:30 AM | 216.1 | 0.2 | 14.6 |
| 6/13/21 7:00 AM | 169.9 | 0.2 | 12.8 |
| 6/13/21 7:30 AM | 459.9 | 0.2 | 11.1 |
| 6/13/21 8:00 AM | 527.2 | 0.2 | 9.5 |
| 6/13/21 8:30 AM | 448.4 | 0.2 | 8.2 |
| 6/13/21 9:00 AM | 352.8 | 0.2 | 7.3 |
| 6/13/21 9:30 AM | 299.5 | 0.2 | 6.6 |
| 6/13/21 10:00 AM | 307.8 | 0.2 | 5.9 |
| 6/13/21 10:30 AM | 358.8 | 0.2 | 5.4 |
| 6/13/21 11:00 AM | 264.2 | 0.2 | 5.2 |
| 6/13/21 11:30 AM | 357.1 | 0.2 | 5.1 |
| 6/13/21 12:00 PM | 499.0 | 0.2 | 5.0 |
| 6/13/21 12:30 PM | 342.7 | 0.2 | 4.9 |
| 6/13/21 1:00 PM | 311.5 | 0.2 | 4.8 |
| 6/13/21 1:30 PM | 273.6 | 0.2 | 4.5 |
| 6/13/21 2:00 PM | 266.8 | 0.2 | 4.3 |
| 6/13/21 2:30 PM | 299.9 | 0.2 | 4.3 |
| 6/13/21 3:00 PM | 334.8 | 0.2 | 4.3 |
| 6/13/21 3:30 PM | 359.1 | 0.2 | 4.3 |
| 6/13/21 4:00 PM | 232.0 | 0.2 | 4.1 |

| | Station 1 | Station 2 | Station 3 |
|---------------------------------------|------------------------|------------------------|------------------------|
| June 13, 2021 (11 Odor Complaints) | H2S | H2S | H2S |
| (11 Odor Complaints) | 30min Avg H2S Conc. | 30min Avg H2S Conc. | 30min Avg H2S Conc. |
| 6/13/21 4:30 PM | 218.1 | 0.2 | 3.8 |
| 6/13/21 5:00 PM | 214.2 | 0.2 | 3.2 |
| 6/13/21 5:30 PM | 235.0 | 0.2 | 2.9 |
| 6/13/21 6:00 PM | 97.5 | 0.2 | 2.6 |
| 6/13/21 6:30 PM | 37.1 | 0.2 | 2.4 |
| 6/13/21 7:00 PM | 308.3 | 0.2 | 2.3 |
| 6/13/21 7:30 PM | 567.9 | 0.2 | 2.3 |
| 6/13/21 8:00 PM | 362.7 | 0.2 | 2.2 |
| 6/13/21 8:30 PM | 514.6 | 0.2 | 2.1 |
| 6/13/21 9:00 PM | 250.0 | 0.2 | 2.0 |
| 6/13/21 9:30 PM | 315.8 | 0.2 | 2.3 |
| 6/13/21 10:00 PM | 318.0 | 0.6 | 2.4 |
| 6/13/21 10:30 PM | 356.4 | 0.4 | 2.0 |
| 6/13/21 11:00 PM | 216.6 | 0.6 | 2.0 |
| 6/13/21 11:30 PM | 439.0 | 0.8 | 2.0 |

A. Which way is the wind blowing from the Facility on June 13, 2021?

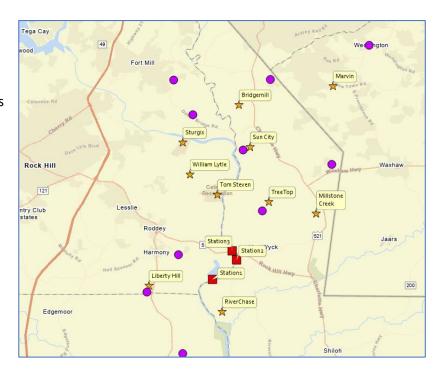
Wind & Speed Direction based on Meteorological data from Station 1 (for Station2 & Station3) – Going North.





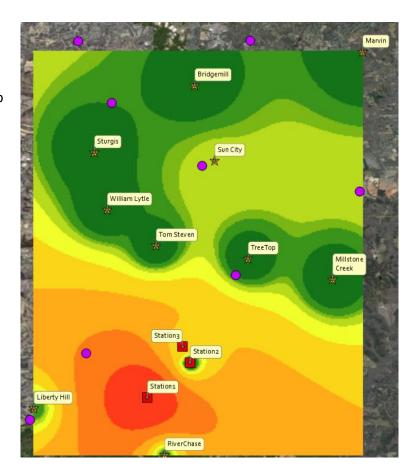
B. Where are the complaints on June 13, 2021?

There were 11 odor complaints with no obvious clusters. With the wind direction from the New Indy Facility (Fence Line data) – it shows that majority of the odor complaints went/observed north of the Facility & not south of the Facility.



C. What is the concentration distribution on June 13, 2021?

This concentration density map shows that northern wind direction from the Facility had caused the H2S concentration to reach the northern communities – especially Tom Steven community.



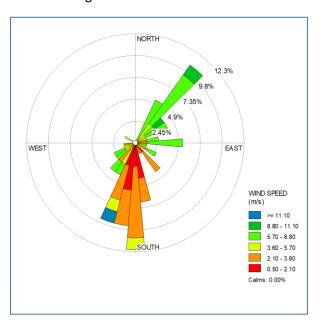
June 14/2021

| June 14, 2021 (567 Odor Complaints) | Station 1 | Station 2 | Station 3 |
|--|---------------------|---------------------|---------------------|
| (567 Odor Complaints) | H2S | H2S | H2S |
| | | | |
| | 30min Avg H2S Conc. | 30min Avg H2S Conc. | 30min Avg H2S Conc. |
| Units | ppb | ppb | ppb |
| 6/14/21 12:00 AM | 223.2 | 0.6 | 2.2 |
| 6/14/21 12:30 AM | AX | 0.5 | 2.3 |
| 6/14/21 1:00 AM | 307.4 | AX | 5.9 |
| 6/14/21 1:30 AM | 296.9 | 2.5 | AX |
| 6/14/21 2:00 AM | 132.7 | 88.7 | 10.4 |
| 6/14/21 2:30 AM | 156.1 | 141.9 | 23.5 |
| 6/14/21 3:00 AM | 152.0 | 132.2 | 44.8 |
| 6/14/21 3:30 AM | 170.0 | 40.1 | 27.5 |
| 6/14/21 4:00 AM | 249.6 | 20.1 | 12.8 |
| 6/14/21 4:30 AM | 211.0 | 85.2 | 14.1 |
| 6/14/21 5:00 AM | 193.6 | 159.8 | 10.7 |
| 6/14/21 5:30 AM | 253.5 | 131.5 | 21.6 |
| 6/14/21 6:00 AM | 115.8 | 84.3 | 52.0 |
| 6/14/21 6:30 AM | 204.0 | 28.1 | 40.0 |
| 6/14/21 7:00 AM | 81.0 | 12.1 | 15.1 |
| 6/14/21 7:30 AM | 119.4 | 7.2 | 9.3 |
| 6/14/21 8:00 AM | 63.0 | 19.6 | 39.1 |
| 6/14/21 8:30 AM | 39.6 | 19.4 | 66.0 |
| 6/14/21 9:00 AM | 1.7 | 14.0 | 53.7 |
| 6/14/21 9:30 AM | 1.2 | 11.5 | 19.3 |
| 6/14/21 10:00 AM | 3.4 | 18.9 | 32.0 |
| 6/14/21 10:30 AM | 6.3 | 6.2 | BF |
| 6/14/21 11:00 AM | 7.7 | 14.0 | BF |
| 6/14/21 11:30 AM | 16.6 | 5.9 | 4.8 |
| 6/14/21 12:00 PM | 8.8 | 13.0 | 3.6 |
| 6/14/21 12:30 PM | 9.7 | 11.2 | 3.0 |
| 6/14/21 1:00 PM | 9.8 | 7.7 | 2.9 |
| 6/14/21 1:30 PM | 15.8 | 10.5 | 3.7 |
| 6/14/21 2:00 PM | 14.1 | 4.2 | 5.8 |
| 6/14/21 2:30 PM | 9.7 | 3.3 | 6.5 |
| 6/14/21 3:00 PM | 13.7 | 7.4 | 6.7 |
| 6/14/21 3:30 PM | 17.0 | 1.9 | 4.7 |
| 6/14/21 4:00 PM | 10.2 | 0.2 | 2.8 |
| 6/14/21 4:30 PM | 18.4 | 0.2 | 2.5 |
| 6/14/21 5:00 PM | 1330.0 | 22.2 | 2.3 |
| 6/14/21 5:30 PM | 14.9 | 56.2 | 94.5 |
| 6/14/21 6:00 PM | 74.1 | 93.5 | 101.2 |
| 6/14/21 6:30 PM | 49.3 | 60.1 | 64.2 |
| 6/14/21 7:00 PM | 30.3 | 27.3 | 27.2 |
| 6/14/21 7:30 PM | 55.0 | 3.7 | 11.6 |

| June 14, 2021 (567 Odor Complaints) | Station 1 | Station 2 | Station 3 |
|--|---------------------|---------------------|---------------------|
| (** *** *** *** | H2S | H2S | H2S |
| | 30min Avg H2S Conc. | 30min Avg H2S Conc. | 30min Avg H2S Conc. |
| Units | ppb | ppb | ppb |
| 6/14/21 8:00 PM | 33.8 | 7.1 | 20.2 |
| 6/14/21 8:30 PM | 120.3 | 1.9 | 58.9 |
| 6/14/21 9:00 PM | 42.5 | 0.2 | 8.4 |
| 6/14/21 9:30 PM | 138.5 | 0.2 | 3.5 |
| 6/14/21 10:00 PM | 97.0 | 0.2 | 8.7 |
| 6/14/21 10:30 PM | 139.7 | 0.2 | 22.4 |
| 6/14/21 11:00 PM | 90.3 | 0.2 | 4.7 |
| 6/14/21 11:30 PM | 104.7 | 0.2 | 34.9 |

A. Which way is the wind blowing from the facility on June 14, 2021?

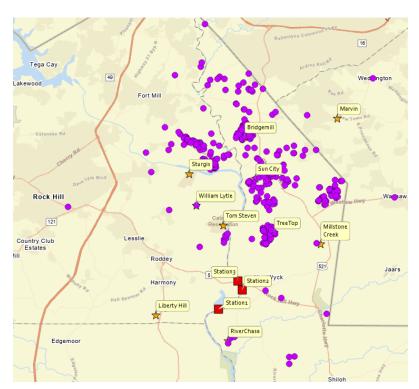
 $\label{thm:condition} Wind \& \ Speed \ Direction \ based \ on \ Meteorological \ data \ from \ Station \ 1 \ (for \ Station 2 \ \& \ Station 3) - Going \ North$





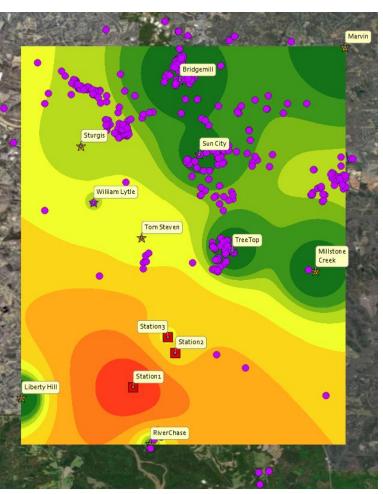
B. Where are the complaints on June 14, 2021?

There were 567 odor complaints with clusters showing mostly near Sun City, Tom Steven and east of TreeTop communities. With the wind direction from the New Indy Facility (Fence Line data) – it shows that majority of the odor complaints went/observed north of the Facility & not south of the Facility.



D. What is the concentration distribution on June 14, 2021?

This concentration density map shows that northern wind direction from the facility has reached sufficiently enough to smell the 1330 ppb in all the communities – even though the highest H2S concentration at the communities do not reflect that.



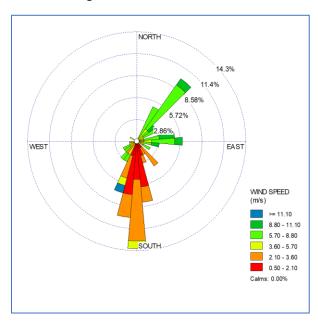
June 15/2021

| | Station 1 | Station 2 | Station 3 |
|----------------------|---------------------|---------------------|---------------------|
| Jun 15, 2021 | | | |
| (58 odor Complaints) | 30min Avg H2S Conc. | 30min Avg H2S Conc. | 30min Avg H2S Conc. |
| Units | ppb | ppb | ppb |
| 6/15/21 12:00 AM | 175.3 | 18.1 | 33.1 |
| 6/15/21 12:30 AM | AX | 24.7 | 27.7 |
| 6/15/21 1:00 AM | 97.7 | AX | 25.7 |
| 6/15/21 1:30 AM | 73.6 | 23.1 | AX |
| 6/15/21 2:00 AM | 95.7 | 9.7 | 41.6 |
| 6/15/21 2:30 AM | 270.6 | 0.5 | 18.7 |
| 6/15/21 3:00 AM | 364.5 | 0.2 | 5.9 |
| 6/15/21 3:30 AM | 206.4 | 0.2 | 2.1 |
| 6/15/21 4:00 AM | 102.1 | 0.2 | 1.7 |
| 6/15/21 4:30 AM | 192.7 | 0.2 | 1.7 |
| 6/15/21 5:00 AM | 245.4 | 0.4 | 2.2 |
| 6/15/21 5:30 AM | 113.4 | 0.5 | 3.4 |
| 6/15/21 6:00 AM | 78.9 | 2.1 | 5.3 |
| 6/15/21 6:30 AM | 88.7 | 6.1 | 7.1 |
| 6/15/21 7:00 AM | 89.1 | 75.7 | 22.3 |
| 6/15/21 7:30 AM | 132.1 | 145.8 | 39.4 |
| 6/15/21 8:00 AM | 3.6 | 131.0 | 22.2 |
| 6/15/21 8:30 AM | 2.2 | 108.2 | 14.4 |
| 6/15/21 9:00 AM | 221.7 | 21.6 | 3.5 |
| 6/15/21 9:30 AM | 388.0 | 0.2 | 2.3 |
| 6/15/21 10:00 AM | AY | 0.7 | 2.1 |
| 6/15/21 10:30 AM | AY | 0.6 | 1.8 |
| 6/15/21 11:00 AM | 464.2 | 0.2 | 1.7 |
| 6/15/21 11:30 AM | 377.3 | 0.2 | 1.7 |
| 6/15/21 12:00 PM | 424.5 | 0.2 | 1.8 |
| 6/15/21 12:30 PM | 443.4 | 0.2 | 1.8 |
| 6/15/21 1:00 PM | 466.9 | 0.2 | 1.9 |
| 6/15/21 1:30 PM | 395.4 | 0.2 | 1.8 |
| 6/15/21 2:00 PM | 522.6 | 0.2 | 1.7 |
| 6/15/21 2:30 PM | 624.7 | 0.2 | 1.5 |
| 6/15/21 3:00 PM | 442.8 | 0.2 | 1.4 |
| 6/15/21 3:30 PM | 489.8 | 0.2 | 1.2 |
| 6/15/21 4:00 PM | 523.0 | 0.2 | 1.2 |
| 6/15/21 4:30 PM | 566.8 | 0.2 | 1.1 |

| | Station 1 | Station 2 | Station 3 |
|--------------------------------------|---------------------|---------------------|---------------------|
| Jun 15, 2021 (58 odor Complaints) | 30min Avg H2S Conc. | 30min Avg H2S Conc. | 30min Avg H2S Conc. |
| Units | ppb | ppb | ppb |
| 6/15/21 5:00 PM | 491.0 | 0.2 | 0.9 |
| 6/15/21 5:30 PM | 676.6 | 0.2 | 0.9 |
| 6/15/21 6:00 PM | 674.9 | 0.2 | 0.9 |
| 6/15/21 6:30 PM | 419.0 | 0.2 | 0.9 |
| 6/15/21 7:00 PM | 46.4 | 0.2 | 1.0 |
| 6/15/21 7:30 PM | 69.3 | 0.2 | 1.0 |
| 6/15/21 8:00 PM | 138.0 | 0.2 | 1.1 |
| 6/15/21 8:30 PM | 205.2 | 0.2 | 1.0 |
| 6/15/21 9:00 PM | 397.5 | 0.2 | 1.0 |
| 6/15/21 9:30 PM | 255.3 | 0.2 | 1.0 |
| 6/15/21 10:00 PM | 185.7 | 0.2 | 0.8 |
| 6/15/21 10:30 PM | 215.5 | 0.2 | 0.8 |
| 6/15/21 11:00 PM | 269.7 | 0.2 | 1.0 |
| 6/15/21 11:30 PM | 225.3 | 0.2 | 1.0 |

A. Which way is the wind blowing from the facility?

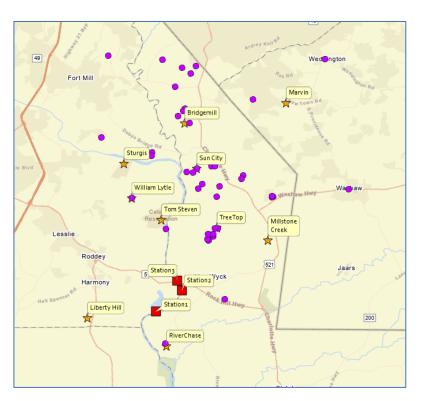
 $\label{thm:condition} \mbox{Wind \& Speed Direction based on Meteorological data from Station 1 (for Station 2 \& Station 3) - Going North$





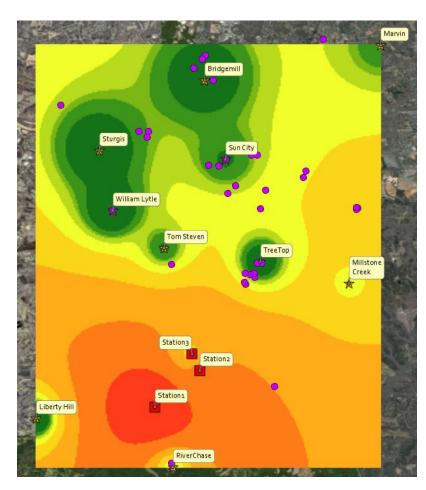
B. Where are the complaints on June 15, 2021?

There were 58 odor complaints. With the wind direction from the New Indy Facility (Fence Line data) – it shows that majority of the odor complaints went/observed north of the Facility & not very much south of the Facility.



C. What is the concentration distribution on June 15, 2021?

This concentration density map shows that northern wind direction from the Facility had caused the H2S concentration to reach the northern communities — especially Tom Steven & TreeTop communities.



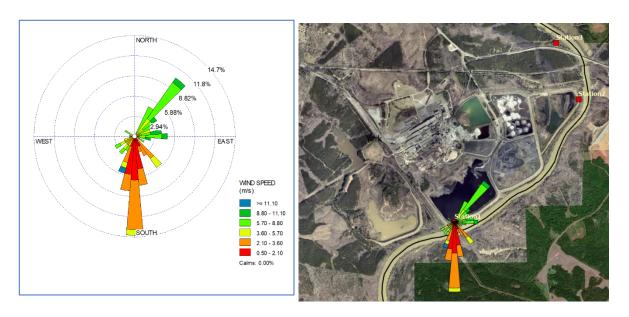
June 16/2021

| Jun 16, 2021 | Station 1 | Station 2 | Station 3 |
|---------------------|-----------|---------------|---------------|
| (4 Odor Complaints) | H2S | H2S | H2S |
| , , , , | 30min Avg | 30min Avg H2S | 30min Avg H2S |
| | H2S Conc. | Conc. | Conc. |
| Units | ppb | ppb | ppb |
| 6/16/21 12:00 AM | 242.5 | 0.2 | 1.0 |
| 6/16/21 12:30 AM | AX | 0.2 | 0.9 |
| 6/16/21 1:00 AM | 401.8 | AX | 4.7 |
| 6/16/21 1:30 AM | 307.2 | 0.2 | AX |
| 6/16/21 2:00 AM | 277.3 | 0.2 | 1.5 |
| 6/16/21 2:30 AM | 241.4 | 0.2 | 1.2 |
| 6/16/21 3:00 AM | 406.3 | 0.2 | 1.1 |
| 6/16/21 3:30 AM | 395.3 | 0.2 | 1.1 |
| 6/16/21 4:00 AM | 397.8 | 0.2 | 1.0 |
| 6/16/21 4:30 AM | 318.9 | 0.2 | 1.0 |
| 6/16/21 5:00 AM | 532.9 | 0.2 | 0.9 |
| 6/16/21 5:30 AM | 332.4 | 0.2 | 0.9 |
| 6/16/21 6:00 AM | 414.9 | 0.2 | 0.9 |
| 6/16/21 6:30 AM | 422.9 | 0.2 | 0.9 |
| 6/16/21 7:00 AM | 345.7 | 0.2 | 1.1 |
| 6/16/21 7:30 AM | 252.3 | 0.2 | 1.0 |
| 6/16/21 8:00 AM | 278.4 | 0.2 | 1.0 |
| 6/16/21 8:30 AM | 311.2 | 0.2 | 0.9 |
| 6/16/21 9:00 AM | 204.0 | 0.2 | 0.8 |
| 6/16/21 9:30 AM | 246.4 | 0.4 | 0.9 |
| 6/16/21 10:00 AM | 91.2 | 0.3 | 0.9 |
| 6/16/21 10:30 AM | 110.9 | 0.6 | 0.8 |
| 6/16/21 11:00 AM | 217.8 | 0.2 | 1.0 |
| 6/16/21 11:30 AM | 216.0 | 0.2 | 0.9 |
| 6/16/21 12:00 PM | 39.8 | 0.2 | 0.7 |
| 6/16/21 12:30 PM | 77.1 | 0.2 | 0.8 |
| 6/16/21 1:00 PM | 99.8 | 0.2 | 0.6 |
| 6/16/21 1:30 PM | 53.8 | 0.2 | 0.7 |
| 6/16/21 2:00 PM | 7.3 | 1.9 | 0.8 |
| 6/16/21 2:30 PM | 12.2 | 1.5 | 2.2 |
| 6/16/21 3:00 PM | 35.1 | 1.3 | 1.5 |
| 6/16/21 3:30 PM | 25.0 | 3.3 | 3.3 |
| 6/16/21 4:00 PM | 8.7 | 2.9 | 0.9 |
| 6/16/21 4:30 PM | 31.1 | 1.5 | 0.8 |
| 6/16/21 5:00 PM | 62.7 | 4.8 | 0.6 |
| 6/16/21 5:30 PM | 65.3 | 3.0 | 0.6 |
| 6/16/21 6:00 PM | 124.3 | 1.7 | 0.6 |
| 6/16/21 6:30 PM | 51.3 | 1.1 | 0.7 |
| 6/16/21 7:00 PM | 67.9 | 0.4 | 0.8 |
| 6/16/21 7:30 PM | 373.7 | 0.2 | 0.8 |
| 6/16/21 8:00 PM | 204.6 | 0.2 | 0.9 |

| Jun 16, 2021 | Station 1 | Station 2 | Station 3 |
|---------------------|-----------|---------------|---------------|
| (4 Odor Complaints) | H2S | H2S | H2S |
| | 30min Avg | 30min Avg H2S | 30min Avg H2S |
| | H2S Conc. | Conc. | Conc. |
| Units | ppb | ppb | ppb |
| 6/16/21 8:30 PM | 374.3 | 0.4 | 0.8 |
| 6/16/21 9:00 PM | 315.1 | 2.0 | 0.9 |
| 6/16/21 9:30 PM | 350.4 | 9.3 | 0.9 |
| 6/16/21 10:00 PM | 330.2 | 17.0 | 1.0 |
| 6/16/21 10:30 PM | 302.5 | 11.9 | 1.0 |
| 6/16/21 11:00 PM | 298.5 | 18.8 | 1.6 |
| 6/16/21 11:30 PM | 306.9 | 5.4 | 4.0 |

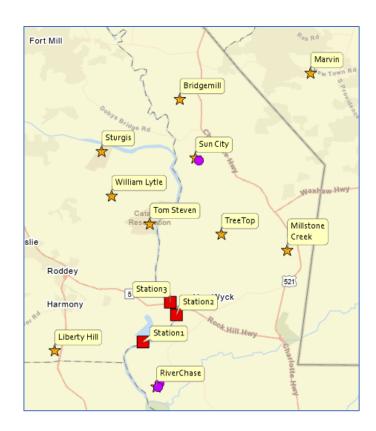
A. Which way is the wind blowing on June 16, 2021?

 $\label{thm:condition} \mbox{Wind \& Speed Direction based on Meteorological data from Station 1 (for Station 2 \& Station 3) - Going North$



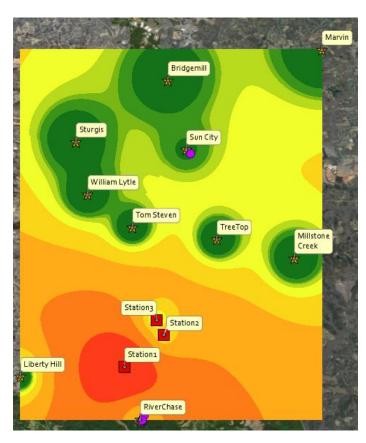
B. Where are the complaints on June 16, 2021?

There were only 4 odor complaints with RiverChase Community, south of the Facility, having more H2S concentration than other communities on this day.



C. What is the concentration distribution on June 16, 2021?

This concentration density map shows that northern wind direction from the Facility had caused the H2S concentration to reach the northern communities — especially Tom Steven community.



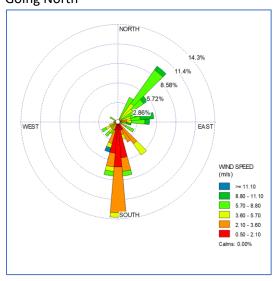
June 17/2021

| | Station 1 | Station 2 | Station 3 |
|----------------------|---------------|---------------|---------------|
| | H2S | H2S | H2S |
| Jun 17, 2021 | | | |
| (15 Odor Complaints) | 30min Avg H2S | 30min Avg H2S | 30min Avg H2S |
| | Conc. | Conc. | Conc. |
| Units | ppb | ppb | ppb |
| 6/17/21 12:00 AM | 294.8 | 10.0 | 2.3 |
| 6/17/21 12:30 AM | AX | 5.3 | 3.2 |
| 6/17/21 1:00 AM | 225.4 | AX | 7.9 |
| 6/17/21 1:30 AM | 288.0 | 1.7 | AX |
| 6/17/21 2:00 AM | 191.6 | 1.0 | 1.9 |
| 6/17/21 2:30 AM | 305.8 | 0.9 | 1.2 |
| 6/17/21 3:00 AM | 78.7 | 0.4 | 1.0 |
| 6/17/21 3:30 AM | 390.9 | 0.2 | 0.9 |
| 6/17/21 4:00 AM | 167.5 | 0.2 | 0.8 |
| 6/17/21 4:30 AM | 210.8 | 0.2 | 0.8 |
| 6/17/21 5:00 AM | 255.5 | 0.2 | 0.8 |
| 6/17/21 5:30 AM | 296.4 | 0.2 | 0.8 |
| 6/17/21 6:00 AM | 302.5 | 0.2 | 0.8 |
| 6/17/21 6:30 AM | 372.0 | 0.2 | 0.8 |
| 6/17/21 7:00 AM | 316.2 | 0.2 | 0.7 |
| 6/17/21 7:30 AM | 328.6 | 0.2 | 0.7 |
| 6/17/21 8:00 AM | 277.8 | 0.2 | 0.8 |
| 6/17/21 8:30 AM | 385.7 | 0.2 | 0.8 |
| 6/17/21 9:00 AM | 427.7 | 0.2 | 0.7 |
| 6/17/21 9:30 AM | 410.3 | 0.4 | 0.7 |
| 6/17/21 10:00 AM | 420.4 | 0.2 | 0.7 |
| 6/17/21 10:30 AM | 269.9 | 0.2 | 0.6 |
| 6/17/21 11:00 AM | 190.7 | 0.2 | 0.6 |
| 6/17/21 11:30 AM | 162.9 | 0.2 | 0.6 |
| 6/17/21 12:00 PM | 160.3 | 0.2 | 0.6 |
| 6/17/21 12:30 PM | 128.3 | 0.2 | 0.6 |
| 6/17/21 1:00 PM | 99.4 | 0.2 | 0.6 |
| 6/17/21 1:30 PM | 121.7 | 0.2 | 0.6 |
| 6/17/21 2:00 PM | 93.3 | 0.2 | 0.6 |
| 6/17/21 2:30 PM | 123.0 | 0.2 | 0.6 |
| 6/17/21 3:00 PM | 64.6 | 0.2 | 0.6 |
| 6/17/21 3:30 PM | 151.5 | 0.2 | 0.7 |
| 6/17/21 4:00 PM | 86.5 | 0.2 | 0.6 |
| 6/17/21 4:30 PM | 98.5 | 0.2 | 0.5 |
| 6/17/21 5:00 PM | 165.2 | 0.2 | 0.5 |
| 6/17/21 5:30 PM | 132.2 | 0.2 | 0.4 |
| 6/17/21 6:00 PM | 208.2 | 0.2 | 0.3 |
| 6/17/21 6:30 PM | 115.8 | 0.2 | 0.5 |

| | Station 1 | Station 2 | Station 3 |
|--------------------------------------|---------------|---------------|---------------|
| | H2S | H2S | H2S |
| Jun 17, 2021 (15 Odor Complaints) | 30min Avg H2S | 30min Avg H2S | 30min Avg H2S |
| | Conc. | Conc. | Conc. |
| Units | ppb | ppb | ppb |
| 6/17/21 7:00 PM | 141.9 | 0.2 | 0.6 |
| 6/17/21 7:30 PM | 368.1 | 0.2 | 0.7 |
| 6/17/21 8:00 PM | 229.7 | 0.2 | 0.7 |
| 6/17/21 8:30 PM | 367.8 | 0.2 | 0.8 |
| 6/17/21 9:00 PM | 250.3 | 1.4 | 1.2 |
| 6/17/21 9:30 PM | 295.6 | 4.5 | 2.6 |
| 6/17/21 10:00 PM | 320.5 | 8.5 | 2.3 |
| 6/17/21 10:30 PM | 225.2 | 8.9 | 1.7 |
| 6/17/21 11:00 PM | 255.5 | 2.1 | 5.8 |
| 6/17/21 11:30 PM | 141.8 | 0.5 | 11.6 |

A. Which way is the wind blowing on June 17, 2021?

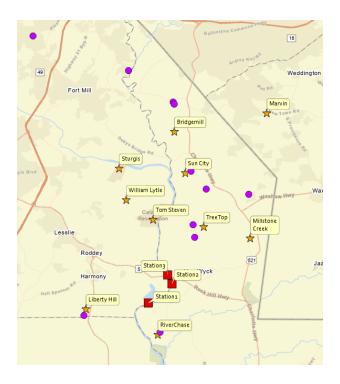
Wind & Speed Direction based on Meteorological data from Station 1 (for Station2 & Station3) – Going North





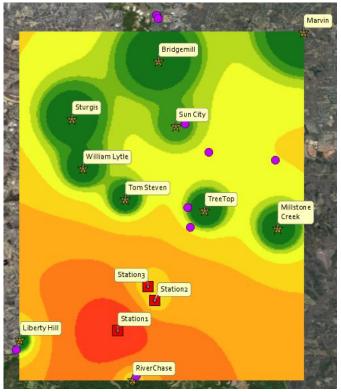
B. Where are the complaints on June 17, 2021?

There were 15 odor complaints.



C. What is the concentration distribution on June 17, 2021?

This concentration density map shows that northern wind direction from the Facility had caused the H2S concentration to reach the northern communities – especially Tom Steven community.



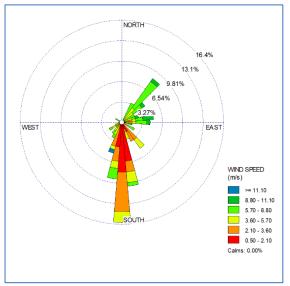
June 18/2021

| | Station 1 | Station 2 | Station 3 |
|------------------|---------------|---------------|---------------|
| Calendar Day | H2S | H2S | H2S |
| Jun 18, 2021 | | | |
| 54.1. 10, 2021 | 30min Avg H2S | 30min Avg H2S | 30min Avg H2S |
| | Conc. | Conc. | Conc. |
| Units | ppb | ppb | ppb |
| 6/18/21 12:00 AM | 118.0 | 0.8 | 17.4 |
| 6/18/21 12:30 AM | AX | 5.4 | 17.3 |
| 6/18/21 1:00 AM | 107.7 | AX | 15.3 |
| 6/18/21 1:30 AM | 126.9 | 4.4 | AX |
| 6/18/21 2:00 AM | 208.8 | 4.5 | 6.5 |
| 6/18/21 2:30 AM | 184.4 | 3.2 | 6.5 |
| 6/18/21 3:00 AM | 172.8 | 4.8 | 5.9 |
| 6/18/21 3:30 AM | 178.2 | 2.2 | 3.3 |
| 6/18/21 4:00 AM | 230.2 | 1.0 | 4.3 |
| 6/18/21 4:30 AM | 208.5 | 2.5 | 5.8 |
| 6/18/21 5:00 AM | 262.4 | 3.1 | 2.5 |
| 6/18/21 5:30 AM | 173.7 | 2.0 | 2.0 |
| 6/18/21 6:00 AM | 197.4 | 1.5 | 5.6 |
| 6/18/21 6:30 AM | 291.4 | 4.4 | 5.8 |
| 6/18/21 7:00 AM | 132.8 | 5.4 | 11.9 |
| 6/18/21 7:30 AM | 189.6 | 5.5 | 5.4 |
| 6/18/21 8:00 AM | 233.3 | 5.1 | 9.7 |
| 6/18/21 8:30 AM | 141.8 | 2.8 | 4.9 |
| 6/18/21 9:00 AM | 45.7 | 26.4 | 14.7 |
| 6/18/21 9:30 AM | 33.3 | 0.5 | 1.8 |
| 6/18/21 10:00 AM | 18.0 | 0.2 | 0.8 |
| 6/18/21 10:30 AM | 15.9 | 0.2 | 1.0 |
| 6/18/21 11:00 AM | 17.4 | 1.2 | 1.0 |
| 6/18/21 11:30 AM | 21.5 | 0.3 | 1.2 |
| 6/18/21 12:00 PM | 11.3 | 1.2 | 3.3 |
| 6/18/21 12:30 PM | 9.0 | 0.6 | 3.5 |
| 6/18/21 1:00 PM | 6.6 | 3.0 | 5.2 |
| 6/18/21 1:30 PM | 5.8 | 0.9 | 6.5 |
| 6/18/21 2:00 PM | 10.3 | 0.6 | 6.7 |
| 6/18/21 2:30 PM | 12.4 | 3.4 | 5.8 |
| 6/18/21 3:00 PM | 20.6 | 0.2 | 2.5 |
| 6/18/21 3:30 PM | 7.4 | 0.2 | 0.9 |
| 6/18/21 4:00 PM | 10.7 | 0.2 | 1.4 |
| 6/18/21 4:30 PM | 12.5 | 0.2 | 1.0 |
| 6/18/21 5:00 PM | 29.8 | 0.2 | 0.7 |
| 6/18/21 5:30 PM | 36.1 | 0.2 | 0.7 |

| | Station 1 | Station 2 | Station 3 |
|------------------|---------------|---------------|---------------|
| Calendar Day | H2S | H2S | H2S |
| Jun 18, 2021 | | | |
| , | 30min Avg H2S | 30min Avg H2S | 30min Avg H2S |
| | Conc. | Conc. | Conc. |
| Units | ppb | ppb | ppb |
| 6/18/21 6:00 PM | 55.9 | 0.2 | 0.6 |
| 6/18/21 6:30 PM | 75.3 | 0.2 | 0.7 |
| 6/18/21 7:00 PM | 99.0 | 0.2 | 1.5 |
| 6/18/21 7:30 PM | 202.4 | 0.2 | 1.5 |
| 6/18/21 8:00 PM | 215.3 | 0.8 | 7.5 |
| 6/18/21 8:30 PM | 200.8 | 7.8 | 49.9 |
| 6/18/21 9:00 PM | 156.4 | 6.4 | 49.9 |
| 6/18/21 9:30 PM | 135.1 | 1.3 | 22.8 |
| 6/18/21 10:00 PM | 10.5 | 31.9 | 50.7 |
| 6/18/21 10:30 PM | 14.4 | 14.6 | 77.2 |
| 6/18/21 11:00 PM | 19.9 | 19.0 | 75.1 |
| 6/18/21 11:30 PM | 46.2 | 14.4 | 71.7 |

A. Which way is the wind blowing from the facility?

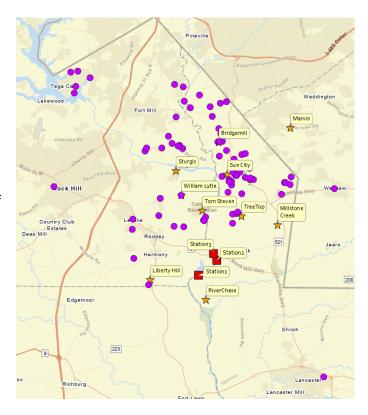
 $\label{thm:condition} Wind \& \ Speed \ Direction \ based \ on \ Meteorological \ data \ from \ Station \ 1 \ (for \ Station 2 \ \& \ Station 3) - Going \ North$





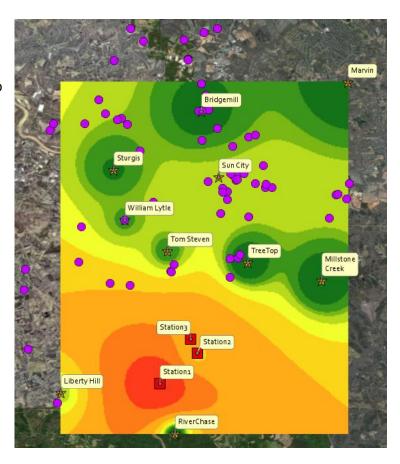
B. Where are the complaints on June 108, 2021?

There were 108 odor complaints with clusters showing mostly near Sun City, Tom Steven and east of Sun City communities. With the wind direction from the New Indy Facility (Fence Line data) – it shows that majority of the odor complaints went/observed north of the Facility & not south of the Facility.



C. What is the concentration distribution on June 18, 2021?

This concentration density map shows that northern wind direction from the Facility had caused the H2S concentration to reach the northern communities – especially Tom Steven community.



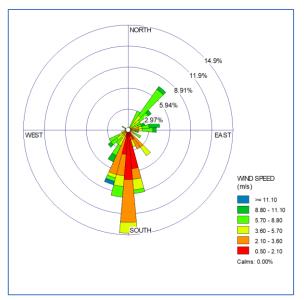
June 19/2021

| | Station 1 | Station 2 | Station 3 |
|----------------------|---------------------|---------------------|---------------------|
| Jun 19, 2021 | H2S | H2S | H2S |
| (56 Odor Complaints) | | | |
| | 30min Avg H2S Conc. | 30min Avg H2S Conc. | 30min Avg H2S Conc. |
| Units | ppb | ppb | ppb |
| 6/19/21 12:00 AM | 82.4 | 6.4 | 47.2 |
| 6/19/21 12:30 AM | AX | 3.6 | 38.0 |
| 6/19/21 1:00 AM | 123.9 | AX | 14.8 |
| 6/19/21 1:30 AM | 120.4 | 0.4 | AX |
| 6/19/21 2:00 AM | 272.2 | 0.2 | 17.4 |
| 6/19/21 2:30 AM | 92.5 | 0.2 | 11.5 |
| 6/19/21 3:00 AM | 54.8 | 0.2 | 13.9 |
| 6/19/21 3:30 AM | 78.4 | 1.2 | 26.8 |
| 6/19/21 4:00 AM | 100.0 | 35.4 | 31.3 |
| 6/19/21 4:30 AM | 82.1 | 30.8 | 29.7 |
| 6/19/21 5:00 AM | 49.8 | 3.7 | 24.3 |
| 6/19/21 5:30 AM | 8.1 | 0.3 | 15.2 |
| 6/19/21 6:00 AM | 61.3 | 5.5 | 14.1 |
| 6/19/21 6:30 AM | 26.4 | 0.5 | 22.5 |
| 6/19/21 7:00 AM | 21.4 | 5.1 | 32.7 |
| 6/19/21 7:30 AM | 16.4 | 4.6 | 28.0 |
| 6/19/21 8:00 AM | 3.0 | 20.0 | 23.0 |
| 6/19/21 8:30 AM | 1.3 | 5.8 | 17.3 |
| 6/19/21 9:00 AM | 1.1 | 7.8 | 17.9 |
| 6/19/21 9:30 AM | 1.3 | 12.9 | 3.5 |
| 6/19/21 10:00 AM | 1.5 | 9.9 | 1.6 |
| 6/19/21 10:30 AM | 2.2 | 8.2 | 1.4 |
| 6/19/21 11:00 AM | 1.5 | 5.5 | 1.4 |
| 6/19/21 11:30 AM | 3.6 | 11.0 | 1.3 |
| 6/19/21 12:00 PM | 1.8 | 14.5 | 1.6 |
| 6/19/21 12:30 PM | 1.5 | 13.6 | 2.4 |
| 6/19/21 1:00 PM | 1.4 | 12.6 | 1.4 |
| 6/19/21 1:30 PM | 2.4 | 7.7 | 1.3 |
| 6/19/21 2:00 PM | 1.1 | 18.8 | 6.7 |
| 6/19/21 2:30 PM | 2.8 | 22.7 | 20.6 |
| 6/19/21 3:00 PM | 3.7 | 7.3 | 41.5 |
| 6/19/21 3:30 PM | 5.3 | 4.5 | 59.8 |
| 6/19/21 4:00 PM | 4.3 | 31.1 | 33.7 |
| 6/19/21 4:30 PM | 4.5 | 3.6 | 36.5 |
| 6/19/21 5:00 PM | 4.2 | 5.3 | 34.9 |

| | Station 1 | Station 2 | Station 3 | |
|----------------------|---------------------|---------------------|---------------------|--|
| Jun 19, 2021 | H2S | H2S | H2S | |
| (56 Odor Complaints) | | | | |
| | 30min Avg H2S Conc. | 30min Avg H2S Conc. | 30min Avg H2S Conc. | |
| Units | ppb | ppb | ppb | |
| 6/19/21 5:30 PM | 1.8 | 20.2 | 24.1 | |
| 6/19/21 6:00 PM | 11.9 | 20.6 | 8.0 | |
| 6/19/21 6:30 PM | 16.7 | 22.5 | 23.9 | |
| 6/19/21 7:00 PM | 9.0 | 13.0 | 30.6 | |
| 6/19/21 7:30 PM | 12.5 | 10.3 | 36.3 | |
| 6/19/21 8:00 PM | 6.3 | 9.9 | 22.6 | |
| 6/19/21 8:30 PM | 6.9 | 31.6 | 14.1 | |
| 6/19/21 9:00 PM | 3.3 | 19.6 | 10.1 | |
| 6/19/21 9:30 PM | 17.8 | 4.0 | 1.3 | |
| 6/19/21 10:00 PM | 45.0 | 18.9 | 1.1 | |
| 6/19/21 10:30 PM | 17.7 | 31.9 | 1.3 | |
| 6/19/21 11:00 PM | 22.1 | 20.5 | 2.0 | |
| 6/19/21 11:30 PM | 45.2 | 5.4 | 17.9 | |

A. Which way is the wind blowing on June 19, 2021?

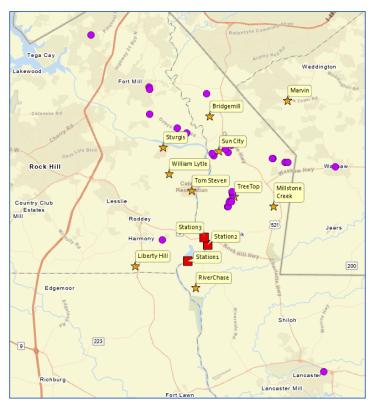
Wind & Speed Direction based on Meteorological data from Station 1 (for Station2 & Station3) – Going North.





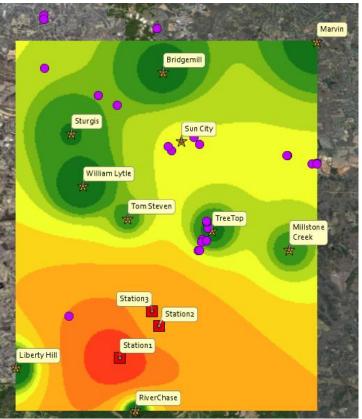
B. Where are the complaints on June 19, 2021?

There were 56 odor complaints.



C. What is the concentration distribution on June 19, 2021?

This concentration density map shows that northern wind direction from the Facility had caused the H2S concentration to reach the northern communities – especially TreeTop community.

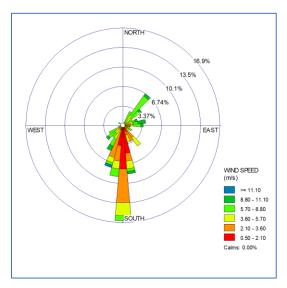


June 20/2021

| Jun 20, 2021 | Station 1 | Station 2 | Station 3 |
|----------------------|---------------------|---------------------|---------------------|
| (61 Odor Complaints) | H2S | H2S H2S | |
| | 30min Avg H2S Conc. | 30min Avg H2S Conc. | 30min Avg H2S Conc. |
| Units | ppb ppb | | ppb |
| 6/20/21 12:00 AM | 60.1 | 0.2 | 10.2 |
| 6/20/21 12:30 AM | BF | 0.2 | 3.5 |
| 6/20/21 1:00 AM | BF | BF | 8.9 |
| 6/20/21 1:30 AM | 39.3 | BF | BF |
| 6/20/21 2:00 AM | 36.8 | 2.8 | BF |
| 6/20/21 2:30 AM | 26.8 | 0.2 | 2.4 |
| 6/20/21 3:00 AM | 44.2 | 0.2 | 1.5 |
| 6/20/21 3:30 AM | 35.6 | 0.2 | 11.9 |
| 6/20/21 4:00 AM | 8.6 | 0.2 | 1.7 |
| 6/20/21 4:30 AM | 366.4 | 0.2 | 1.1 |
| 6/20/21 5:00 AM | 812.0 | 0.2 | 1.1 |
| 6/20/21 5:30 AM | 1024.0 | 0.2 | 1.0 |
| 6/20/21 6:00 AM | 397.0 | 0.2 | 1.0 |
| 6/20/21 6:30 AM | 21.0 | 1.7 | 1.3 |
| 6/20/21 7:00 AM | 13.4 | 2.7 | 2.7 |
| 6/20/21 7:30 AM | 10.1 | 0.5 | 2.2 |
| 6/20/21 8:00 AM | 12.6 | 0.2 | 1.5 |
| 6/20/21 8:30 AM | 11.5 | 0.4 | 12.6 |
| 6/20/21 9:00 AM | 16.1 | 0.4 | 14.5 |
| 6/20/21 9:30 AM | 12.3 | 0.2 | 11.2 |
| 6/20/21 10:00 AM | 17.5 | 0.2 | 7.6 |
| 6/20/21 10:30 AM | 20.4 | 0.2 | 2.2 |
| 6/20/21 11:00 AM | 15.9 | 0.2 | 1.7 |
| 6/20/21 11:30 AM | 34.5 | 10.1 | 21.2 |
| 6/20/21 12:00 PM | 150.9 | 48.5 | 9.3 |
| 6/20/21 12:30 PM | 8.8 | 8.9 | 2.9 |
| 6/20/21 1:00 PM | 9.4 | 7.6 | 1.3 |
| 6/20/21 1:30 PM | 41.5 | 7.3 | 4.8 |
| 6/20/21 2:00 PM | 34.5 | 23.4 | 40.2 |
| 6/20/21 2:30 PM | 31.5 | 0.2 | 26.1 |
| 6/20/21 3:00 PM | 61.6 | 0.2 | 1.6 |
| 6/20/21 3:30 PM | 17.1 | 0.2 | 1.2 |
| 6/20/21 4:00 PM | 2.9 | 0.2 | 1.4 |
| 6/20/21 4:30 PM | 8.1 | 0.2 | 1.3 |
| 6/20/21 5:00 PM | 37.6 | 0.2 | 1.2 |
| 6/20/21 5:30 PM | 31.2 | 0.2 | 1.6 |
| 6/20/21 6:00 PM | 12.0 | 0.2 | 1.5 |
| 6/20/21 6:30 PM | 4.3 | 0.2 | 1.4 |

| Jun 20, 2021 | Station 1 | Station 2 | Station 3 |
|----------------------|---------------------|---------------------|---------------------|
| (61 Odor Complaints) | H2S | H2S | H2S |
| | 30min Avg H2S Conc. | 30min Avg H2S Conc. | 30min Avg H2S Conc. |
| Units | ppb | ppb | ppb |
| 6/20/21 7:00 PM | 3.4 | 0.2 | 1.3 |
| 6/20/21 7:30 PM | 20.8 | 0.2 | 1.1 |
| 6/20/21 8:00 PM | 1.1 | 0.2 | 1.0 |
| 6/20/21 8:30 PM | 21.8 | 0.2 | 1.5 |
| 6/20/21 9:00 PM | 41.3 | 0.2 | 1.6 |
| 6/20/21 9:30 PM | 97.0 | 0.2 | 1.6 |
| 6/20/21 10:00 PM | 22.4 | 0.2 | 1.5 |
| 6/20/21 10:30 PM | 47.0 | 0.9 | 1.4 |
| 6/20/21 11:00 PM | 8.4 | 32.4 | 4.5 |
| 6/20/21 11:30 PM | 22.2 | 52.4 | 4.5 |

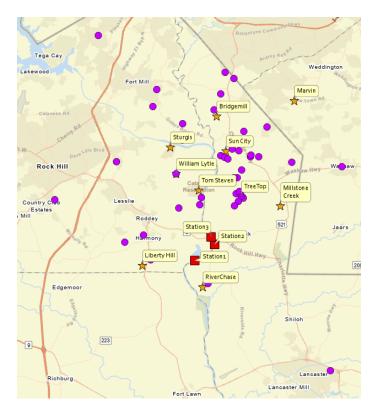
A. Which way is the wind blowing on June 20, 2021? Meteorological data from Station 1 (for Station 2 & Station 3) – Going North





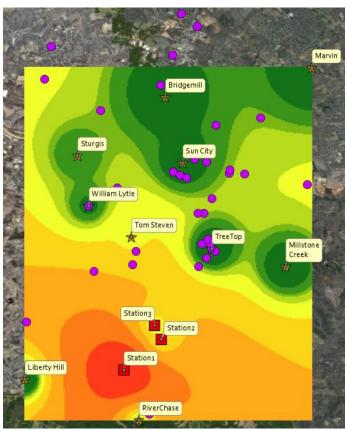
B. Where are the complaints June 20, 2021?

There were 61 odor complaints.



C. What is the concentration distribution on June 20, 2021?

This concentration density map shows that northern wind direction from the Facility had caused the H2S concentration to reach the northern communities – especially Tom Steven community.



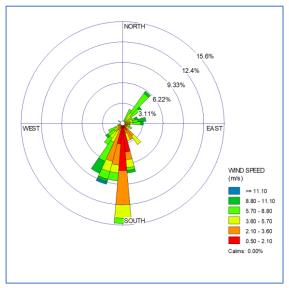
June 21/2021

| Jun 21, 2021 | Station 1 | Station 2 | Station 3 |
|----------------------|---|-----------|---------------------|
| (64 Odor Complaints) | H2S | H2S | H2S |
| | 30min Avg H2S Conc. 30min Avg H2S Conc. 30min A | | 30min Avg H2S Conc. |
| Units | ppb | ppb | ppb |
| 6/21/21 12:00 AM | 27.1 | 22.7 | 4.4 |
| 6/21/21 12:30 AM | AX | 18.7 | 4.4 |
| 6/21/21 1:00 AM | 41.1 | AX | 4.8 |
| 6/21/21 1:30 AM | 38.3 | 28.9 | AS |
| 6/21/21 2:00 AM | 45.7 | 5.5 | AN |
| 6/21/21 2:30 AM | 68.2 | 0.6 | AN |
| 6/21/21 3:00 AM | 43.3 | 0.2 | AN |
| 6/21/21 3:30 AM | 18.4 | 4.7 | AN |
| 6/21/21 4:00 AM | 23.6 | 7.3 | AN |
| 6/21/21 4:30 AM | 20.7 | 11.9 | AN |
| 6/21/21 5:00 AM | 22.1 | 21.3 | AN |
| 6/21/21 5:30 AM | 29.5 | 8.6 | AN |
| 6/21/21 6:00 AM | 21.3 | 13.0 | AN |
| 6/21/21 6:30 AM | 43.5 | 17.8 | AN |
| 6/21/21 7:00 AM | 37.0 | 21.5 | AN |
| 6/21/21 7:30 AM | 11.1 | 13.7 | AN |
| 6/21/21 8:00 AM | 26.0 | 12.2 | AN |
| 6/21/21 8:30 AM | 28.0 | 16.3 | AN |
| 6/21/21 9:00 AM | 22.6 | 11.5 | AN |
| 6/21/21 9:30 AM | 7.0 | 7.2 | AN |
| 6/21/21 10:00 AM | 9.3 | 6.1 | AN |
| 6/21/21 10:30 AM | 17.6 | 2.1 | AN |
| 6/21/21 11:00 AM | 24.4 | 1.6 | AN |
| 6/21/21 11:30 AM | 18.4 | 4.5 | AN |
| 6/21/21 12:00 PM | 17.2 | 8.2 | AN |
| 6/21/21 12:30 PM | 16.0 | 11.9 | AN |
| 6/21/21 1:00 PM | 10.4 | 13.9 | AN |
| 6/21/21 1:30 PM | 9.0 | 14.3 | AN |
| 6/21/21 2:00 PM | 23.9 | 3.0 | AN |
| 6/21/21 2:30 PM | 11.7 | 13.0 | AN |
| 6/21/21 3:00 PM | 11.6 | 28.0 | AN |
| 6/21/21 3:30 PM | 24.2 | 2.4 | AN |
| 6/21/21 4:00 PM | 16.0 | 6.4 | AN |
| 6/21/21 4:30 PM | 15.2 | 10.3 | AN |

| Jun 21, 2021 | Station 1 | Station 2 | Station 3 |
|----------------------|---------------------|---------------------|---------------------|
| (64 Odor Complaints) | H2S | H2S | H2S |
| | 30min Avg H2S Conc. | 30min Avg H2S Conc. | 30min Avg H2S Conc. |
| Units | ppb | ppb | ppb |
| 6/21/21 5:00 PM | AY | 8.6 | AN |
| 6/21/21 5:30 PM | 10.6 | 19.3 | AN |
| 6/21/21 6:00 PM | 27.8 | 4.0 | AN |
| 6/21/21 6:30 PM | 36.2 | 0.2 | AN |
| 6/21/21 7:00 PM | 43.4 | 0.2 | AN |
| 6/21/21 7:30 PM | 42.4 | 0.2 | AN |
| 6/21/21 8:00 PM | 14.3 | 26.4 | AN |
| 6/21/21 8:30 PM | 20.6 | 14.1 | AN |
| 6/21/21 9:00 PM | 59.5 | 22.3 | AN |
| 6/21/21 9:30 PM | 10.2 | 23.6 | AN |
| 6/21/21 10:00 PM | 13.9 | 22.4 | AN |
| 6/21/21 10:30 PM | 31.0 | 54.2 | AN |
| 6/21/21 11:00 PM | 19.7 | 50.8 | AN |
| 6/21/21 11:30 PM | 14.9 | 55.5 | AN |

A. Which way is the wind blowing from the facility on June 21, 2021?

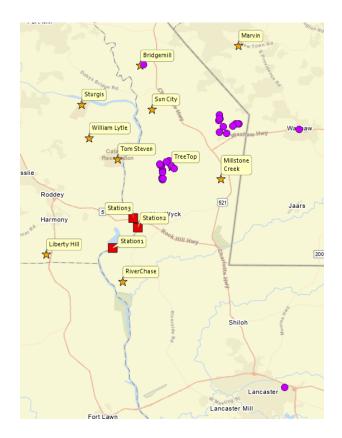
 $\label{thm:condition} \mbox{Wind \& Speed Direction based on Meteorological data from Station 1 (for Station 2 \& Station 3) - Going North$





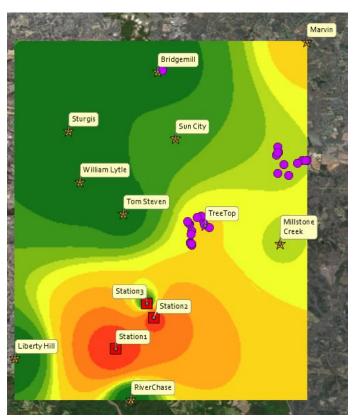
B. Where are the complaints on June 21, 2021?

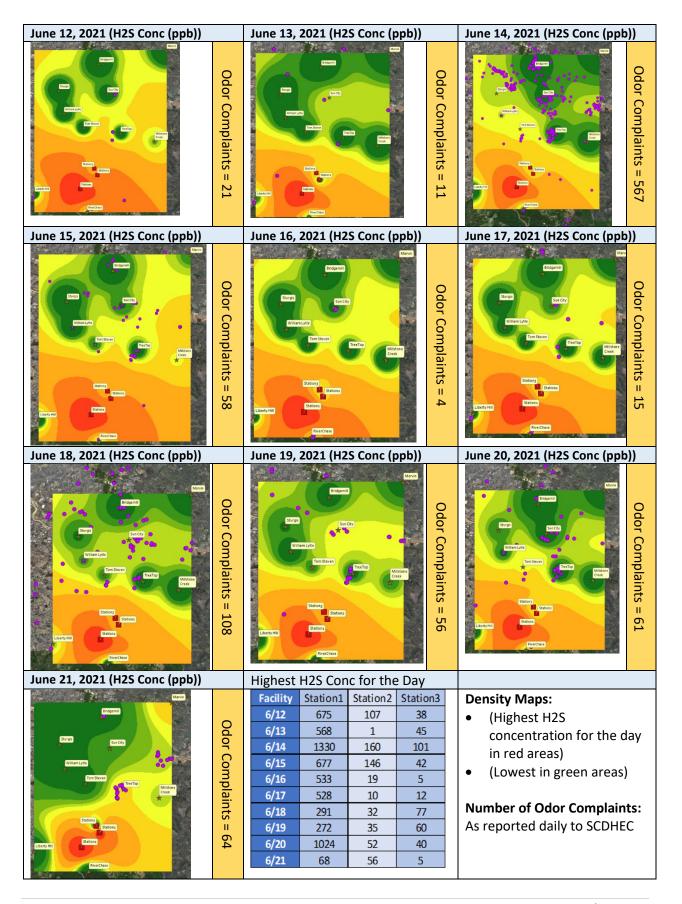
There were 64 odor complaints with clusters showing mostly near TreeTop and northeast of TreeTop Communities.



C. What is the concentration distribution on June 21, 2021?

This concentration density map shows that northern wind direction from the Facility had caused the H2S concentration to reach the northern communities – especially TreeTop.





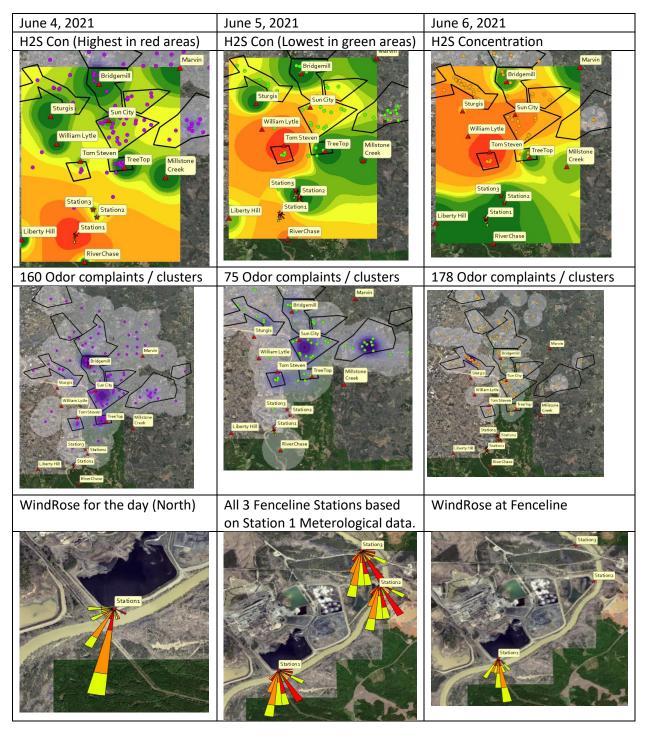
Analysis

Previous Observation (June 4 – 6, 2021)

On June 4, H2S concentration from the New Indy Facility peaked and large, several community wide odor complaints were reported. On June 5, even though the H2S concentrations began to lower at the Facility (fencelines), the northern wind direction sent the H2S concentration to increase in the northern communities but was not wide- spread to all the communities. Then, on June 6, even though the H2S concentrations at the Facility reduced, the northern wind direction from the Facility had caused the H2S concentration to go North and spread to several more communities with increased number of odor complaints.

| Location | Date | Max | Date | Max | Date | Max |
|------------------|----------|----------------------|----------|-------|----------|-------|
| Station1 | 6/4/2021 | <mark>1202.00</mark> | 6/5/2021 | 7.34 | 6/6/2021 | 1.22 |
| Station2 | 6/4/2021 | 22.56 | 6/5/2021 | 1.01 | 6/6/2021 | 0.61 |
| Station3 | 6/4/2021 | 22.47 | 6/5/2021 | 3.08 | 6/6/2021 | 1.96 |
| Sturgis | 6/4/2021 | 8.00 | 6/5/2021 | 2.00 | 6/6/2021 | 7.00 |
| William Lytle | 6/4/2021 | 11.00 | 6/5/2021 | 10.00 | 6/6/2021 | 11.00 |
| TreeTop | 6/4/2021 | 1.00 | 6/5/2021 | 1.00 | 6/6/2021 | 2.00 |
| Marvin | 6/4/2021 | 8.00 | 6/5/2021 | 3.00 | 6/6/2021 | 1.00 |
| Sun City | 6/4/2021 | 25.00 | 6/5/2021 | 6.00 | 6/6/2021 | 10.00 |
| Millstone Creek | 6/4/2021 | 5.00 | 6/5/2021 | 3.00 | 6/6/2021 | 3.00 |
| Bridgemill | 6/4/2021 | 8.00 | 6/5/2021 | 2.00 | 6/6/2021 | 2.00 |
| RiverChase | 6/4/2021 | 5.00 | 6/5/2021 | 9.00 | 6/6/2021 | 0.00 |
| Liberty Hill | 6/4/2021 | 0.00 | 6/5/2021 | 4.00 | 6/6/2021 | 0.00 |
| Tom Steven | 6/4/2021 | 28.00 | 44352 | 22.00 | 6/6/2021 | 21.00 |
| | | | | | | |
| Total Complaints | 160 | | 76 | | 178 | |

Summary of previous H2S odor observations in communities.



Current Observation (June 12-21, 2021)

Several additional data were analyzed because of several exceedances were observed on 6/12 (675 ppb), 6/14 (1330 ppb), 6/15 (624.7ppb, 676.6ppb, 674.9ppb) and 6/20 (812ppb, 1024ppb). This report summarizes all the data to show the locations of the facility fencelines & communities where H2S data was collected. Also, the odor complaints that were reported by the public was analyzed.

The data does show that the number of complaints increased on days of H2S exceedances. This data is based on the daily exceedance level of 600ppb. The concentration density maps show that H2S concentrations have not been as high as it was observed

On the H2S monitoring reports – several abbreviations have been used.

| 100N 11D | . 0.1 |
|-------------|-------------------------------------|
| AQS Null Da | ita Codes |
| Qualifier | Item Description |
| Code | 1 |
| AB | TECHNICIAN UNAVAILABLE |
| AC | CONSTRUCTION/REPAIRS IN AREA |
| AD | SHELTER STORM DAMAGE |
| AE | SHELTER TEMPERATURE OUTSIDE LIMITS |
| AI | INSUFFICIENT DATA (CAN'T CALCULATE) |
| AM | MISCELLANEOUS VOID |
| AN | MACHINE MALFUNCTION |
| AO | BAD WEATHER |
| AP | VANDALISM |
| AS | POOR QUALITY ASSURANCE RESULTS |
| AT | CALIBRATION |
| AU | MONITORING WAIVED |
| AV | POWER FAILURE (POWR) |
| AW | WILDLIFE DAMAGE |
| AX | PRECISION CHECK (PREC) |
| AY | Q C CONTROL POINTS (ZERO/SPAN) |
| AZ | Q C AUDIT (AUDT) |
| BA | MAINTENANCE/ROUTINE REPAIRS |
| BB | UNABLE TO REACH SITE |
| BC | MULTI-POINT CALIBRATION |
| BD | AUTO CALIBRATION |
| BE | BUILDING/SITE REPAIR |
| BF | PRECISION/ZERO/SPAN |
| BJ | OPERATOR ERROR |
| BK | SITE COMPUTER/DATA LOGGER DOWN |